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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,568	01/21/2004	Greg Birchmeier	14252	3441

7590
Sally J Brown
AUTOLIV ASP, INC
3350 Airport Road
Ogden, UT 84405

11/21/2006

EXAMINER

LUONG, VINH

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,568

Applicant(s)

BIRCHMEIER ET AL.

Examiner

Vinh T. Luong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

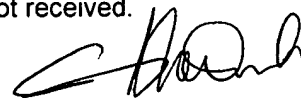
Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Vinh T. Luong
Primary Examiner

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/10/05 and 6/6/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because of the implied phrase "is disclosed." Correction is required. See MPEP § 608.01(b).

3. The drawings are objected to because the drawings are inconsistent with the specification and the claims. For example, paragraph [0049] of the specification describes and claim 10 claims the fluid 32 comprising water, oil, etc. However, Figs. 1-5 show that the fluid is made of stipple or cheese in accordance with the drawing symbols for draftsperson in MPEP 608.02.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be

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renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The disclosure is objected to because of the following informalities: the specification and the claims are inconsistent with the drawings. For example, paragraph [0049] of the specification describes and claim 10 claims the fluid 32 comprising water, oil, etc. However, Figs. 1-5 show that the fluid is made of stipple or cheese in accordance with the drawing symbols for draftsperson in MPEP 608.02. Appropriate correction is required.

5. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms, such as, "attachable" in claims 1, 15, and 26, "may flow" in claim 2, and "sealable" in claim 13 are vague and indefinite in the sense that things, which may be done, are not required to be done. For example, in claims 1, 15, and 26, the central member is attachable but not structurally required to be attached to a steering column. See "discardable" in *Mathis v. Hydro Air Industries*, 1 USPQ2d 1513, 1527 (D.C. Calif. 1986), "crimpable" in *Application of Collier*, 158 USPQ 266 (CCPA 1968), "removable" in *In re Burke Inc.*, 22 USPQ2d 1368, 1372

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(D.C. Calif. 1992), and “comparable” in *Ex parte Anderson*, 21 USPQ2d 1241, 1249 (BPAI 1992).

It is unclear whether:

(a) A confusing variety of terms, such as, “a vehicle” and “a connected vehicle” in claims 3/1, 6/1, and 7/1, etc. refers to the same or different things. See MPEP 608.01(o); and

(b) The term that appears at least twice, such as, “a vehicle” in claim 32 refers to the same or different things. See double inclusion in MPEP 2173.05(o).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-7, 11, 26, 27, and 32, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kreuzer’300 (EP 0 414 300 A1 cited by Applicant).

Regarding claim 1, Kreuzer’300 teaches a steering wheel for a vehicle, comprising:

a central member 3 attachable to a steering column (not shown);

an outer rim 4 connected to the central member 3 and having an internal chamber (at 6 in Fig. 2), wherein the outer rim 4 generally encircles the central member 3; and

a fluid 6 disposed within the internal chamber, wherein the fluid 6 dampens vibration during steering wheel use.

Regarding claim 3, the fluid 6 has a volume selected to dampen vibrations of the outer rim caused by operation of a connected vehicle. See English abstract.

Regarding claim 4, the fluid 6 occupies less than an entire volume of the internal chamber. See Fig 2.

Regarding claim 5, the fluid occupies less than three quarters of the entire volume of the internal chamber. See Fig. 2.

Regarding claim 6, the fluid inherently has a viscosity selected to dampen vibrations of the outer rim 4 caused by operation of a connected vehicle. See English abstract.

Regarding claim 7, the fluid inherently has a weight selected to dampen vibrations of the outer rim 4 caused by operation of a connected vehicle. See English abstract.

Regarding claim 11, the fluid 6 inherently has a volume, viscosity, and weight selected to provide a predetermined inertia for the outer rim 4.

Regarding claim 26, Kreuzer'300 teaches a steering wheel for a vehicle, comprising: a central member 3 attachable to a steering column of a vehicle; a generally circular outer rim 4 connected to the central member 3 and having an internal chamber; and a fluid 6 disposed within the internal chamber, wherein the fluid 6 occupies less than an entire volume of the internal chamber, and wherein the fluid inherently has a volume, viscosity, and weight selected to dampen vibrations of the outer rim 4 caused by operation of the vehicle.

Regarding claim 27, see regarding claim 5 above.

Regarding claim 32, Kreuzer'300 teaches a steering wheel for a vehicle, comprising: central member means 3 for attachment to a steering column of a vehicle; outer rim means 4 for connection to the central member means 3, the outer rim means 4 having an internal chamber, wherein the outer rim means 4 generally encircles the central member means 3; a damping means 6 disposed within the internal chamber for damping vibrations of the outer rim 4 caused

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by operation of the vehicle, wherein the damping means comprises a fluid 6 that occupies less than an entire volume of the internal chamber.

8. Claims 1, 2, 4, 10, 12, 15-17, 22-26, 31, and 32, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kreuzer'383 (DE 39 27 383 A1).

Regarding claim 1, Kreuzer'383 teaches a steering wheel for a vehicle, comprising:

a central member 3 attachable to a steering column (not shown);

an outer rim 4 connected to the central member 3 and having an internal chamber (at 6 in Fig. 2), wherein the outer rim 4 generally encircles the central member 3; and

a fluid 6 disposed within the internal chamber, wherein the fluid 6 dampens vibration during steering wheel use.

Regarding claim 2, the chamber is hollow and has a tubular form (see English abstract), thus, it is continuous such that the fluid may flow in both a clockwise and a counterclockwise direction from each point within the internal chamber.

Regarding claim 4, the fluid 6 occupies less than an entire volume of the internal chamber. See Fig 2 and abstract.

Regarding claim 10, the fluid 6 is selected from a group consisting of water, oil, grease, antifreeze, and a combination thereof. See page 2 of English abstract.

Regarding claim 12, the fluid is a mixture of glycol and water (i.e., an antifreeze fluid), thus, the fluid remains in a liquid state between approximately -40° Fahrenheit and approximately +194° Fahrenheit. This fact is well known as evidenced by publications about antifreeze attached.

Regarding claim 15, see regarding claims 1, 2, and 4 above.

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Regarding claim 16, the outer rim 4 is generally circular.

Regarding claim 17, the fluid 6 occupies less than three quarters of the entire volume of the internal chamber (Fig. 2).

Regarding claim 22, the internal chamber is disposed entirely within the outer rim 4.

Regarding claim 23, see regarding claim 10 above.

Regarding claim 24, the fluid 6 has a volume, viscosity, and weight selected to dampen vibrations of the outer rim caused by operation of a connected vehicle. See abstract.

Regarding claim 25, the fluid 6 has a volume, viscosity, and weight selected to provide a predetermined inertia for the outer rim 4. See abstract.

Regarding claim 26, see regarding claims 15 and 24 above.

Regarding claim 31, see regarding claim 10 or 23 above.

Regarding claim 32, Kreuzer'383 teaches a steering wheel for a vehicle, comprising: central member means 3 for attachment to a steering column of a vehicle; outer rim means 4 for connection to the central member means 3, the outer rim means 4 having an internal chamber, wherein the outer rim means 4 generally encircles the central member means 3; a damping means 6 disposed within the internal chamber for damping vibrations of the outer rim 4 caused by operation of the vehicle, wherein the damping means comprises a fluid 6 that occupies less than an entire volume of the internal chamber.

9. Claims 1, 13-15, 20, 21, 26, 30, and 32, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Masahiro'858 (Japanese Utility Model No. 56-99858).

Regarding claim 1, Mashahiro'858 teaches a steering wheel for a vehicle, comprising:

a central member 2 attachable to a steering column (not shown);

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an outer rim 3 connected to the central member 2 and having an internal chamber 5, wherein the outer rim 3 generally encircles the central member 2; and

a fluid 10 disposed within the internal chamber 5, wherein the fluid 10 dampens vibration during steering wheel use.

Regarding claim 13, the outer rim 3 comprises a sealable hole 7, 8 for inserting the fluid 10 into the internal chamber 5.

Regarding claim 14, a removable plug 11 is sized to be seated in the hole 7, 8.

Regarding claim 15, Mashahiro'858 teaches a steering wheel, comprising: a central member 2 attachable to a steering column; an outer rim 3 connected to the central member 2 and having an internal chamber 5, wherein the outer rim 3 generally encircles the central member 2; and a fluid 10 disposed within the internal chamber 5, wherein the fluid dampens vibration during steering wheel use, wherein the fluid 10 is capable of occupying less than an entire volume of the internal chamber 5, and wherein the internal chamber 5 is continuous such that the fluid 10 may flow in both a clockwise and a counterclockwise direction from each point within the internal chamber 5.

Note that the fluid 10 is capable of occupying less than the entire volume of the chamber 5 by, e.g., (a) partially filling the chamber 5 as seen in Kreuzer'383 or Kreuzer'300; or (b) opening the plug 11 to partially drain the fluid 10 out of the chamber 5. It is well settled that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use,

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then, it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claims 20 and 21, see regarding claims 13 and 14 above.

Regarding claim 26, Mashahiro'858 teaches a steering wheel for a vehicle, comprising: a central member 2 attachable to a steering column of a vehicle; a generally circular outer rim 3 connected to the central member 2 and having an internal chamber 5; and a fluid 10 disposed within the internal chamber 5, wherein the fluid 10 is capable of occupying less than an entire volume of the internal chamber 5, and wherein the fluid 10 inherently has a volume, viscosity, and weight selected to dampen vibrations of the outer rim 3 caused by operation of the vehicle. See English abstract.

Regarding claim 30, see regarding claim 13 above.

Regarding claim 32, Mashahiro'858 teaches a steering wheel for a vehicle, comprising: central member means 2 for attachment to a steering column of a vehicle; outer rim means 3 for connection to the central member means 2, the outer rim means 3 having an internal chamber 5, wherein the outer rim means 3 generally encircles the central member means 2; a damping means 10 disposed within the internal chamber 5 for damping vibrations of the outer rim 3 caused by operation of the vehicle, wherein the damping means comprises a fluid 10 that is capable of occupying less than an entire volume of the internal chamber 5.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1, 8, 9, 15, 18, 19, 26, 28, and 29, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilmore (GB 433,531 cited by Applicant).

Regarding claim 1, Gilmore teaches a steering wheel for a vehicle, comprising:

a central member 16 attachable to a steering column (unnumbered in Fig. 3);

an outer rim 15 connected to the central member 16 and having a first internal chamber (unnumbered in Fig. 3), wherein the outer rim 15 generally encircles the central member 16; and

a fluid (viscous liquid. Ibid. lines 17-97, page 3) disposed within a second internal chamber 12, wherein the fluid dampens vibration during steering wheel use.

Gilmore teaches the invention substantially as claimed. Moreover, Gilmore teaches or suggests that his device that comprises the fluid, mass 5, and particle 6 may be applied to or formed as a part of other parts of the vehicle that are subjected to vibration. Ibid. page 2, lines 78-112. The other parts of the vehicle include the steering wheel rim 15.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the fluid to a part of other parts of the vehicle, such as, the chamber

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of Gilmore's rim in order to dampen the vibrations of Gilmore's rim as explicitly suggested by Gilmore.

Regarding claim 8, Gilmore's particles 6 are disposed within the fluid.

Regarding claim 9, at least one solid mass 5 is disposed within the fluid.

Regarding claim 15, see regarding claim 1 above. On the one hand, Gilmore's claim 2 recites "wherein the casing is *filled* with a viscous fluid." (Emphasis added). Gilmore's term "filled" broadly covers both "partially filled" and "totally filled." On the other hand, note that it is common knowledge in the art to partially fill the fluid in the chamber of Gilmore as evidenced by the art cited. See, e.g., Kreuzer'383 or Kreuzer'300.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to partially fill the fluid to a part of other parts of the vehicle, such as, the chamber of Gilmore's rim in order to dampen the vibrations of Gilmore's rim as implicitly suggested by Gilmore or by common knowledge in the art.

Regarding claims 18 and 19, see regarding claims 8 and 9 above.

Regarding claim 26, see regarding claim 15 above and note that Gilmore's fluid inherently has a volume, viscosity, and weight.

Regarding claims 28 and 29, see regarding claims 8 and 9 above.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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14. Claims 1, 15, 26, and 32, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Kreuzer'624 (US Patent Application Publication No. 2004/0024524 A2).

Regarding claim 1, Kreuzer'624 teaches a steering wheel for a vehicle, comprising:

a central member 14 attachable to a steering column (not shown);

an outer rim 12 connected to the central member 14 and having an internal chamber 20, wherein the outer rim 12 generally encircles the central member 14; and

a fluid 30 disposed within the internal chamber 20, wherein the fluid 30 dampens vibration during steering wheel use.

Regarding claim 15, Kreuzer'624 teaches a steering wheel, comprising: a central member 14 attachable to a steering column; an outer rim 12 connected to the central member 14 and having an internal chamber 20, wherein the outer rim 12 generally encircles the central member 14; and a fluid 30 disposed within the internal chamber 20, wherein the fluid 30 dampens vibration during steering wheel use, wherein the fluid 30 is capable of occupying less than an entire volume of the internal chamber 20 (id. paragraph [0011]), and wherein the internal chamber 20 is continuous (Figs. 1 and 4) such that the fluid 30 may flow in both a clockwise and a counterclockwise direction from each point within the internal chamber 20.

Regarding claim 26, see regarding claim 15 above and note that Kreuzer'604's fluid 30 is glycol (id. paragraph [0021]). Glycol inherently has a volume, viscosity, and weight. As a matter of fact, virtually any fluid in liquid form has a volume, viscosity, and weight.

Regarding claim 32, Kreuzer'624 teaches a steering wheel for a vehicle, comprising: central member means 14 for attachment to a steering column of a vehicle; outer rim means 12 for connection to the central member means 14, the outer rim means 12 having an internal

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chamber 20, wherein the outer rim means 12 generally encircles the central member means 14; a damping means 30 disposed within the internal chamber 20 for damping vibrations of the outer rim 12 caused by operation of the vehicle, wherein the damping means comprises a fluid 30 that is capable of occupying less than an entire volume of the internal chamber 20.

15. Claims 8, 9, 18, 19, 28, and 29, as best understood, are further rejected under 35 U.S.C. 103(a) as being unpatentable over Kreuzer'624 in view of Pierce (US Patent No. 3,006,690).

Regarding claims 8, 9, 18, 19, 28, and 29, Kreuzer'624 teaches the invention substantially as claimed. However, Kreuzer'624 does not teach the particles or at least one solid mass disposed within the fluid.

Pierce teaches the particles 25 or at least one solid mass 25 disposed within the fluid 24 in order to balance or dampen the vibration. See column 1, line 65 through column 2, line 14.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the particles or at least one solid mass disposed within the fluid in order to balance or dampen the vibration the steering wheel of Kreuzer'624 as taught or suggested by Pierce.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Thomas (solid mass 5).

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

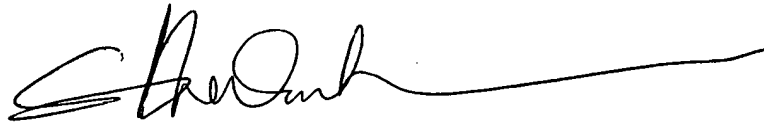
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luong

November 16, 2006



Vinh T. Luong
Primary Examiner